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AMERICAN MUSEUM,

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CONTENTS.

PROSE.

POETRY.

TO CORRESPONDENTS.

THE obſervations on the aſperſion of the negroes, and the extract from the meteorological jonrnal of the rev. mr. Reichell—intended for the preſent number, have been unavoidably poſtponed.

Abſurd cuſtoms—the hill of ſcience—and remarks on the treatment of ſervants, ſhall appear in the next number.

The ſecretary of the treaſury's report, and the obſervations on blindneſs, ſhall be concluded in our next.

The tranſpoſed lines for the *amuſement* of the ladies, would be more likely to *perplex* than *amuſe*.

Meteorological obſervations made at Philadelphia, in January 1792.

Days.	Barometer. Engliſh foot,						Thermom. Farenheit.		Anemometer. Prevailing wind.	Weather.
	In.	$\frac{1}{12}$	$\frac{1}{16}$	*In.*	$\frac{1}{12}$	$\frac{1}{16}$	D $\frac{1}{10}$	D $\frac{1}{10}$		
1	30	4	3	30	2	0	33 7	36 9	NNE	rain,
2	29	11	7	29	11	10	33 7	38 1	NNE	rain,
3	29	10	7	29	10	7	39 2	45 9	ESE	fog,
4	30	2	12	30	3	10	34 7	43 7	WNW	fair,
5	30	4	0	30	0	13	29 5	38 1	NW	fog,
6	29	10	5	30	0	9	29 5	30 2	NW	fair,
7	30	3	2	30	2	5	17 1	21 2	NNE	cloudy, ſnow,
8	30	0	15	30	1	2	19 6	26 8	N	cloudy,
9	30	2	12	30	3	3	19 2	26 1	NNW	cloudy,
10	30	4	5	30	4	14	11 6	21 2	NW	fair,
11	30	5	9	30	5	8	10 0	25 5	NW	fair,
12	30	2	6	29	11	9	14 0	19 8	NNE	cloudy,
13	29	5	12	29	6	8	18 7	30 2	WNW	fair, ſnow,
14	29	9	10	29	10	14	17 1	28 6	WNW	cloudy,
15	30	1	4	30	1	4	14 9	28 6	NW	fair,
16	30	1	14	30	2	6	17 1	25 2	WNW	cloudy,
17	30	3	3	30	3	0	16 0	27 9	WNW	fair,
18	30	1	8	29	10	8	13 8	22 8	NW	cloudy, ſnow,
19	29	8	9	29	9	0	17 6	27 0	NW	fair,
20	29	10	3	29	8	11	9 9	28 8	W	fair,
21	29	11	14	29	12	0	18 7	26 8	W	fair,
22	29	10	9	29	11	5	14 0	17 8	NNE	ſnow,
23	30	4	5	30	4	11	0 7 0	14 7	NW	fair,
24	30	3	8	30	2	13	4 8	23 0	W	fog,
25	30	3	7	30	3	4	5 0	25 5	WNW	cloudy,
26	30	3	13	30	3	12	3 4	27 7	WNW	fog,
27	30	4	10	30	4	12	3 9	28 6	WSW	fog,
28	30	5	4	30	5	8	9 0	22 3	WNW	cloudy,
29	30	5	0	30	4	14	5 2	27 9	NW	fair,
30	30	5	5	30	3	7	7 9	29 7	NNE	cloudy,
31	29	7	14	29	7	14	37 8	39 2	WSW	cloudy,

RESULT.	Barometer.				Thermometer.				Wind and weather.
	28th gr. deg. ele.	30	5	8	23d great. deg. cold	0	7	0	Cloudy and variable.
	13th leaſt elevat.	29	5	12	1ſt great. deg. heat	4	5	9	
	Variation,	0	11	12	Variation,	4	5	2	
	Mean elevation,	30	1	4	Mean deg. heat,	2	2	7	WNW.NW

An oration on the importance and utility of hiſtory, pronounced before a literary ſociety in New York, December 13th, 1791, by David S. Bogart.

GENTLEMEN,

WITH gratitude and pleaſure, I commence the performance of the honourable taſk, which your goodneſs has impoſed. And though the practice of prefacing orations with apologies for deficiency in talents, and with petitions for uncommon indulgence, is almoſt univerſally prevalent: yet I ſhall, in this inſtance, neglect the uſual, nugatory cuſtom, and proceed immediately to my ſubject. To a few obſervations on the importance and utility of hiſtory, permit me to invite your candid attention.

Hiſtory in general may be defined, *a relation of facts*; and is diſtinguiſhed into the different ſpecies, according to the nature of the facts which it relates.

It is not my intention at preſent, to enumerate and enlarge upon each of the different kinds of hiſtory, but ſhall treat of it in its moſt general ſignification. It is a ſubject which deſerves very unuſual attention, and an acquaintance with which, is ſingularly profitable. Here the reſtleſs principle of curioſity may find conſtant employment, and the moſt powerful incitements, to new and further research. Here, the deſire of novelty, ſo congenial to the human mind, may be fully gratified. And, what is ſtill more engaging, here, the votaries of learning may receive the moſt uſeful and important information.

As a cauſe of exciting curioſity, it may be of advantage in forming a habit of enquiry; as a means of affording variety, it may lead us on to the diſcovery of facts, of which we might, otherwiſe, have been ignorant; as a ſource of information, it may furniſh us with neceſſary examples for the regulation of our conduct.

I ſhall take up this ſubject in three different points of view, as it relates to men in their individual, their religious, and their ſocial capacity. That hiſtory intereſts us, as men, is too clear to require a demonſtration. As long as the knowledge of mankind, ſhall be deemed neceſſary and important, ſo long the ſtudy of hiſtory will be conſidered as worthy of the moſt aſſiduous application. It is the beſt repreſentation of human nature any where to be obtained. It is the anatomy of the human heart. It is the miniature picture of the world. Viewed in this light, its utility is particularly conſpicuous. To attend to the ſtudy of human nature with a deſign and a deſire to improve, diſcovers prudence, as well as a ſenſe of duty.

"The proper ſtudy of mankind is man," ſaid a celebrated poet; and indeed when we conſider all mankind as the deſcendents of a common parent, and members of the ſame family; a general knowledge of the conduct and ſituation of the various branches, through all the changes and ſucceſſion of ages, appears in the moſt intereſting point of view.

It is with nations as it is in families. From the very conſtitution of things, they are ſubject to frequent changes and revolutions. Every individual, therefore, as a member of the great family, may with propriety enquire into the innumerable alterations, and diviſions, which have ariſen ſince its firſt formation. Every individual may feel intereſted to learn the origin and progreſs of ſociety; to acquire ſome information of the vaſt increaſe of population—of the riſe and fall of great kingdoms—of the diviſion of countries—of the migrations to, and ſettlements of uninhabited territories—and of the wars, calamities, and judgments, which have diſturbed the happineſs of mankind.

As chriſtians, an acquaintance with hiſtory, is an object of the firſt magnitude Hiſtory contains an illuſtration of a divine and ſuperintending providence, in every age of the world. It corroborates the predictions of ſcripture, and elucidates ſome of its darkeſt and, otherwiſe, unintelligible prophecies. It holds up to view, the palpable errors and abſurdities of the ancients, and it teaches the infinitely various ideas and opinions of different nations, on the ſubject of religion. It expoſes the cruel and impetuous fury of ſuperſtition, and the blindneſs and ignorance of bigotry It informs us of the miraculous preſervation of the chriſtian church, amidſt the oppoſition of perſecutors, and the invidious contempt of infidels It renders an account of the noble martyrs for the truth of divine revelation, who, as it is expreſſed by an elegant and very judicious author,

——"Liv'd unknown,
Till perſecution dragg'd them into fame,
And chas'd them up to heaven."——

Thus it may often be very ſatisfactorily peruſed, and, in affording convincing evidence of the truth of religion, it is extremely intereſting to the chriſtian.

The third view, in which I am to conſider hiſtory, is, as it relates to men in their ſocial capacity; or as they conſtitute a nation, and are the ſubjects of a civil polity. Under this head, it will appear to be indiſpenſibly requiſite. To aſſert, that the riſe and declenſion of every republic and empire in the world, has been effected by the operation of the ſame cauſes, preciſely in the ſame way, would contradict its general teſtimony. The cauſes have been various, and their operation in many points different, and perhaps ſometimes oppoſite.——

As a ſource of ſalutary political inſtruction, hiſtory is an ineſtimable treaſure. Its deſign is to teach by example and experience, and thus to preſerve the ſtateſman, from wild and extravagant theories, which will never admit of being reduced into practice. It is the mirror which reflects the true image of a nation. It is at once an entertaining and advantageous mean, by which we may trace the ſource, and the ſucceſſive changes of every government exiſting upon earth. Where, but from hiſtory, can we learn the eminently ſuperior ſituation of thoſe nations, who have encouraged and cultivated the arts and ſciences, above thoſe who have been held in darkneſs and ignorance? How, but from its gilded page, can we aſcertain, that knowledge has ever been eſſential to the exiſtence of liberty, and that tyranny is the child of ignorance?

Hence its advantage, to evince the neceſſity of promoting the intereſts of literature, of inſtilling into the tender mind the principles of liberty and a knowledge of the rights of man—and of extenſively diffuſing among all ranks of citizens political information. With infinite ſervice may the hiſtoric page be made a guide to the pen, the ſpeeches, and the conduct of the politician: and this may often enable him, to reſtrain his country from the adoption of meaſures, which, perhaps, have been fatally ruinous to others. The experience of nations, of which it is the reſervoir, may with inconceivable advantage, be made the helm of government, to ſteer the political veſſel ſafely through the ſtorms of faction, and the deep laid intrigues of ambition.

Did hiſtory anſwer no other purpoſe, than to tranſmit to poſterity, the names of a Hannibal or a Ceſar, without a detail of their conduct and achievements—did it teach us only, that ſuch empires as the Aſſyrian and Perſian once exiſted, without giving an account of their firſt formation, their conqueſts, their government, and the cauſes of their decline, it would be both uſeleſs and inſipid. Its importance and utility ariſe, not only from its recording an event, but alſo, from its deſcribing the concomitant circumſtances; not only from its preſerving the names of perſonages and of empires, but alſo from its delineating the conduct of the one; and enumerating the cauſes, which co-operated to proſper or ruin the other.

While it preſents us with the names of the Grecian and Roman republics, it affords the means of inveſtigating their riſe, their progreſs, their principles, their numbers, their religion, their government, the changes which they underwent, the cauſes of their decline, and at length of their total ſubverſion. While it paints the character of an Alexander as execrable, it unfolds that of a Cincinnatus, as worthy of admiration and praiſe. While it brands with indelible infamy, the name of a Cataline, it crowns that of a Cicero, with never-fading laurels. While it expoſes a cruel and barbarous Nero, as one of the moſt diſguſtful objects in nature; it elevates a meritorious Socrates to immortal honours.

It is true, that hiſtory is, for the moſt part, but a melancholy teſtimony of human depravity.—We read of the fooliſh pride of monarchs—of their impious and cruel ambition—and of unlawful and barbarous wars. Of what does more than the half of hiſtory conſiſt, but a relation of murders, rapine, injuſtice, perfidy, and revenge? It repreſents the world as in a continual ferment and per-

turbation, harraſſed and torn to pieces by factions, civil diſſentions, and ill-deſigning ambition. The inimical diſpoſition of a prince has ſacrificed thouſands of his ſubjects to gratify his reſentment. The deſire of fame has ſtimulated the general, even at the expenſe of right and humanity, to immortalize his name. The triumphal entry of a Roman emperor is made amidſt the united acclamations of the ſoldiery and citizens; while nature, clothed in cypreſs, bewails the ruthleſs fate of her ſons. However diſagreeable ſuch relations may be, they are indubitable proofs, of the wickedneſs and debaſement of the human heart. They afford a leſſon of great utility to future ages, and are neceſſary to be recorded for their inſtruction.

MEDITATIONS IN A LIBRARY.

FROM every thing in nature, a wiſe man may derive matter of meditation. In meditation, various authors have exerciſed their genius, and tortured their fancy. An author who meant to be ſerious, has meditated on the myſtery of weaving; and an author, who never meant to be ſerious, has meditated on broomſticks. Let me alſo contemplate: and this library ſhall be the ſubject of my meditations.

Before my eyes, an almoſt innumerable multitude of authors are ranged—different in their opinions, as in their bulk and appearance. In what appearance or light ſhall I view this great aſſembly? Shall I conſider it as an ancient legion, drawn out in goodly array, under a fit commander; or as a modern regiment of writers, where the common men have been forced by want, or ſeduced through wickedneſs, into the ſervice, and where the leaders owe their advancement rather to caprice, party favour, and partiality of friends, than to merit or ſervice?

Shall I conſider you, O ye books! as a herd of courtiers or ſtrumpets, who profeſs to be ſubſervient to my uſe, and yet ſeek only your own advantage? No, let me conſider this room as the great charnel-houſe of human reaſon, where darkneſs and corruption dwell; or, as a certain poet aptly expreſſes himſelf,

> Where hot and cold, and wet and dry,
> And beef, and broth, and apple pie,
> Moſt ſlovenly aſſemble.

Who are they, whoſe unadorned raiment beſpeaks their inward ſimplicity? they are law books, ſtatutes, and commentators on ſtatutes; theſe are acts of parliament which all men muſt obey, and yet only few can purchaſe. Like the ſphinx of ancient times, they ſpeak in enigmas: and yet devour the unhappy wretches who comprehend them not.

Thoſe are commentators on ſtatutes; for the peruſing of them, the longeſt life of man would prove inſufficient; for the underſtanding of them, the utmoſt ingenuity of man would not avail.

Cruel is the dilemma between the neceſſity, and the impoſſibility of underſtanding; yet are we not left utterly deſtitute of relief. Behold, for our comfort, an abridgment of law and equity. It conſiſts not of many volumes; it extends to only twenty-two folios. Yet as a few thin cakes may contain the whole nutritive ſubſtance of a ſtalled ox, ſo may this compendium contain the eſſential gravy of many a report and adjudged caſe.

The ſages of the law recommend this abridgment to our peruſal. Let us, with all thankfulneſs of heart, receive their council. Much are we beholden to the phyſicians, who only preſcribe the bark of the quinquina, when they might oblige their patients to ſwallow the whole tree.

From theſe volumes, I turn my eyes on a deep-embodied phalanx, numerous and formidable. They are controverſial divines; ſo has the world agreed to

term them. How arbitrary is language, and how does the cuſtom of mankind join words that reaſon has put aſunder! Thus we often hear of hell-fire cold, of deviliſh handſome, and the like; and thus controverſial and divine have been aſſociated.

Theſe controverſial divines have changed the rule of life, into a ſtandard of diſputation. They have employed the temple of the moſt high as a fencing ſchool, where gymnaſtic exerciſes are daily exhibited, and where victory ſeems only to excite new conteſts. Slighting the bulwarks wherewith he who beſtowed religion upon mankind, had ſecured it, they have encompaſſed it with various minute out-works, which an army of warriors can with difficulty defend.

The next in order to them, are the redoubted antagoniſts of common ſenſe; the gentlemen who cloſe up the common high-way to heaven, and yet open no private road for perſons having occaſion to travel that way. The writers of this tribe are various, but in principles and manners are nothing diſſimilar. Let me review them as they ſtand arranged. Theſe are epicurean writers, who have endeavoured to confound the ideas of right and wrong, to the unſpeakable comfort of highwaymen and ſtock-jobbers. Theſe are enquirers after truth, who never deign to implore the aid of knowledge in their reſearches. Theſe are ſceptics, who labour earneſtly to argue themſelves out of their own exiſtence; herein reſembling that choice ſpirit, who endeavoured ſo artfully to pick his own pocket, as not to be detected by himſelf. Laſt of all, are the compilers of rhapſodies, fragments, and (ſtrange to ſay it) thoughts.

Amidſt this army of anti-martyrs, I diſcern a volume of a peculiar appearance; its meagre aſpect, and the dirty gaudineſs of its habit, makes it bear a perfect reſemblance to a decayed gentleman. This wretched monument of mortality was brought forth in the laſt century; it was the darling and only child of a man of quality. How did its parent exult at its birth! How many flatterers extolled it beyond their own offſpring, and urged its credulous father to diſplay its excellencies to the whole world! Induced by their ſolicitations, the father arrayed his child in ſcarlet and gold, ſubmitted it to the public eye, and called it, "Poems by a man of honour." While he lived, his booby offſpring was treated with the cold reſpect due to the rank and quality of its parent; but when death had locked up his kitchen, and carried off the keys of his cellar, the poor child was abandoned to the pariſh, and kicked from ſtall to ſtall, like a deſpiſed proſtitute; and, after various calamities, was reſcued out of the hands of a vender of Scotch ſnuff, and ſafely placed as a penſioner in the hands of freethinkers.

Thou firſt, thou greateſt vice of the human mind, Ambition! all theſe authors were originally thy votaries! They promiſed to themſelves a name more durable than the calf-ſkin that covered their works. The calf-ſkin (as the dealers ſpeak) is in excellent condition, while the books themſelves remain the prey of that ſilent critic, the worm.

Complete cooks, and conveyancers, bodies of ſchool divinity, and Tommy Thumb; little ſtory books, ſyſtems of philoſophy, and memoirs of women of pleaſure; apologies for the lives of players, and prime miniſters, are all conſigned to one common oblivion.

One book, indeed, there is, which pretends to little reputation; and, by a ſtrange felicity, obtains whatever it demands. To be uſeful for ſome months only, is the whole of its ambition; and though every day that paſſes confeſſedly diminiſhes its utility, yet it is ſought for and purchaſed by all. Such is the deſerved and unenvied character of that excellent treatiſe of practical aſtronomy, called the almanack.

The following account of the ILLUSTRIOUS MARQUIS DE LA FAYETTE, *extracted from a London paper, cannot fail to be acceptable to every reader who knows how to appreciate real magnanimity and patriotism.*

THE perſonal ſervices of monſieur la Fayette have been accompanied with pecuniary ſacrifices of an enormous kind.—Through the whole of the revolution, he not only filled the important ſtation of commandant-general of the Pariſian army, without pay, but he kept open houſe. For many days during the national federation in 1790, he entertained 500 perſons per day in his hotel; and in general he has had a table of forty covers for the etat-major, and for diſtinguiſhed foreigners. His bounty to diſtreſſed veterans has alſo been conſpicuous; and it is known, that he has thus reduced an ample fortune to a mere trifle. He has not 20,000 livres a year of property left, out of an annual revenue of 200,000 livres, with which he came into life. His ſacrifices have been all made on the altar of liberty; for in promoting the freedom of America, he expended many thouſand pounds, beſides devoting his own perſon to the cauſe.

He ſtands completely acquitted from all ſuſpicion, that during the diſorders incident to the French revolution, he has ſtained his military and patriotic character, by mixing in the corruptions which have been practiſed. He has never diverted a louis d'or from its public deſtination. Senſible of theſe facts, and grateful for his eminent ſervices, the beſt men in France are now eager to find the means of conferring on him ſome fair recompenſe. He has rejected every propoſition that has been made: and it is feared, that his proud and honourable delicacy will keep him ſtedfaſt in the refuſal of every national return. It has been propoſed to give him the ecole militaire, for a town reſidence: and as he refuſes all conſideration for himſelf, to adopt his two daughters, and to give them a dower worthy the magnificence of the nation. This alſo he peremptorily rejected, and, taking the Cincinnatus of America for his model, is determined to ſell every eſtate but the ancient family reſidence in Auvergne, where he means, by his own example, to promote a higher cultivation of the ſoil, and to teach the people a more comfortable ſcheme of rural life, than that which is now found in France. For this purpoſe, he has already moved his family to Auvergne, where he has introduced two Engliſh families, a farmer and a gardener, with their wives and children: and here he propoſes to ſit under his own vine, in the freedom which he has ſo largely contributed to eſtabliſh, and from which he will not depart, unleſs to defend it from the violence of hoſtile attack. Content in honeſt poverty,

" He looks upon things precious, as they were
" The common muck o'er all the world: he covets leſs
" Than miſery itſelf would give; rewards
" His deeds with doing them."

Every attempt to reaſon him out of this independent ſpirit has been in vain. They have told him that it has ever been not only the firſt duty, but the moſt forward inclination of every free ſtate, to give noble teſtimonies of its gratitude to its patriots and heroes. Without referring to the old world, they ſtated, that the great and opulent Marlborough did not diſdain to receive from England a palace, nor the illuſtrious Chatham a peerage and a penſion. Ireland has forced on the great author of its freedom a becoming reward; and if his own model, the deliverer of America, has refuſed all pecuniary return from his fellow-citizens, it ſhould be remembered, that general Waſhington had made no ſacrifices of his patrimony in the cauſe, and, what in M. la Fayette's inſtance ought to be urgent, had no children, dependent on his fortune. Theſe arguments, however reaſonable, have drawn from him no other than a very warm expreſſion of thanks to his fellow ſoldiers for their ſolicitude and kindneſs, with a deciſive declaration, that the ſmall remainder of his fortune was more than equal to his wants, and that in truth he was richer than ever, for he poſſeſſed the luxury he coveted moſt, civil and religious liberty.

ORIGIN OF DUELLING.

From a pamphlet on that ſubject.

A Great number of very judicious and uſeful obſervations on duelling are contained in this treatiſe. The author thus deſcribes the origin of this practice:

The judicial combat obtained in ignorant ages, on a concluſion that in this appeal to Providence, innocence and right would be pointed out by victory, and guilt ſtigmatiſed and puniſhed by defeat. But, alas! experience at length taught us not to expect a miraculous interpoſition, whenever ſuperior ſtrength, ſuperior ſkill, and ſuperior bravery or ferocity, either or all of them, happened to appear on the ſide of injuſtice.

Dr. Robertſon (in his elaborate hiſtory of the reign of the emperor, Charles V.) derives the faſhion of terminating private differences by the ſword or piſtol, from the illuſtrious example of the challenge ſent by Francis I. of France, to the emperor Charles V. and if this was not the firſt inſtance of a voluntary challenge, independent of legal authority, the dignity of the parties, who propoſed to decide their quarrel this way, was ſufficient ſanction for extending this cuſtom. Dr. Robertſon's remarks on this memorable affair are well worth producing, and are as under:

"The example of two perſonages ſo illuſtrious, drew ſuch general attention, and carried along with it ſo much authority, as gave riſe to an important change of manners all over Europe. Duels, as has been already obſerved, had long been permitted by the European nations, and, forming a part of their juriſprudence, were authoriſed by the magiſtrate on many occaſions, as the moſt proper method of terminating queſtions with regard to property, or of deciding thoſe which reſpected crimes. But ſingle combats being conſidered as ſolemn appeals to the omniſcience and juſtice of the Supreme Being, they were allowed only in public cauſes, according to the preſcription of law, and carried on in a judicial form. Men accuſtomed to this manner of deciſion in courts of juſtice, were naturally led to apply it to perſonal and private quarrels. Duels, which at firſt could be appointed by the civil judge alone, were fought without the interpoſition of his authority, and in caſes to which the law did not extend. The tranſaction between Charles and Francis ſtrongly countenanced this practice. Upon every affront, or injury, which ſeemed to touch his honour, a gentleman thought himſelf entitled to draw his ſword, and to call on his adverſary to make reparation. Such an opinion introduced among men of fierce courage, of high ſpirit, and of rude manners, when offence was often given, and revenge was always prompt, produced moſt fatal conſequences. Much of the beſt blood in Chriſtendom was ſhed; many uſeful lives were ſacrificed; and, at ſome periods, war itſelf hath ſcarcely been more deſtructive, than theſe conteſts of honour. So powerful, however, is the dominion of faſhion, that neither the terror of penal laws, nor reverence for religion, have been able entirely to aboliſh a practice unknown among the ancients, and not juſtifiable by any principle of reaſon: though at the ſame time it muſt be admitted, that to this abſurd cuſtom we may aſcribe, in ſome degree, the extraordinary gentleneſs and complaiſance of modern manners, and that reſpect of attention of one man to another, which, at preſent, render the ſocial intercourſes of life far more agreeable and decent than among the moſt civilized nations of antiquity."

This is, perhaps, ſaying as much as can be advanced on the favourable ſide of duelling; and it would be ſtrange, if a practice ſo generally adopted had nothing to be offered in its vindication: but it would be paying an unmerited compliment to the duel, if the advantages of ſocial civility and gentleneſs of behaviour were attributed more to ſo brutal an origin, than to the operation of

arts and commerce, which prevailed ſo little in ancient times, but which have given ſo evident a ſuperiority to our civil inſtitutions, and taught us the immenſe advantages derived from the mild intercourſe of peaceable manners.

The author, after having very fully expoſed the wickedneſs, folly, and abſurdity of dueling, propoſes the following method for determining the quarrels of men of honour:

Let a law be ſolicited, declaring the act of ſending a challenge, or the reducing a perſon to defend his life with ſword or piſtol, to be felony; and the killing a perſon in a duel to be puniſhed as murder, unleſs ſufficient proof is made that the party killed really urged the combat.

In every quarrel between two gentlemen, where ſatisfaction is thought neceſſary, let the parties be empowered to ſummon a jury of honour from among their friends, ſix to be appointed by one gentleman, and ſix by the other; or, in caſe of a refuſal of either party, let the ſix choſen by the other complete the number by their own apointment, each nominating one: and finally, let all this be done, if poſſible, free from the embarraſſing intervention of lawyers.

Let this jury of honour, when duly aſſembled, diſcuſs the merits of the diſpute in queſtion, and form their opinion by a majority of votes; but to guard againſt generating freſh quarrels by the diſcovery of the votes on either ſide, let the whole twelve be bound to ſecrecy upon their honour, and the whole twelve ſign the verdict of the majority. Let a copy of this verdict be delivered, or tranſmitted to the gentleman whoſe conduct is condemned; and if he refuſes to make the required conceſſion, or due ſatisfaction, let this opinion be publiſhed in ſuch a manner as may be thought proper, and be underſtood to diveſt him of his character as a gentleman, ſo long as he remains contumacious.

By this ſingle expedient, conveyed in few words, it is hoped the neceſſity of duels may be effectually ſuperceded, the practice ſuppreſſed, and ample ſatisfaction enforced for all injuries of honour. In the examination of ſubjects of importance, we are often tempted to overlook the thing we want, on a ſuppoſition that it cannot be near at hand. This plan may, perhaps, admit of amendment; but it is to be feared, that the more complicated it is rendered, the more difficult it may prove to carry into execution; and it is to be hoped, ſuch as it is, it will not be the worſe thought of, for coming from an unknown pen. Perhaps this circumſtance may operate in its favour. Occaſional tribunals of honour, ſo eaſily erected, to ſuit all affairs that can come before them, would, in all likelihood, ſupport the proper decorums of genteel behaviour, more ſtrictly than the apprehenſions of being called to account in the preſent inconſiſtent mode.

ELECTRICITY AND MAGNETISM COMPARED.

By the abbe Bertholon.

THE phenomena of magnetiſm, which have an affinity with thoſe of electricity, have induced ſeveral philoſophers to think, that there is an analogy between the two fluids which produce them, and even to conſider them as of the ſame nature. Theſe phenomena being curious and intereſting in themſelves, it may not be amiſs to mention them. Natural and artificial electricity, ſometimes produce magnetiſm in bodies which are ſuſceptible of it, and ſometimes change its direction. The truth of this we cannot doubt, ſince it is demonſtrated by well authenticated experiments. Let us begin with the proofs, furniſhed by obſervations made upon natural electricity.

Firſt, the philoſophical tranſactions relate, that mr. Howard, being on board

a veſſel bound to Barbadoes, in company with another veſſel commanded by mr. Grafton, of New England, they heard a dreadful clap of thunder, in the latitude of Barbadoes, by which the mizen maſt of the ſecond veſſel was broken, the ſails torn, and the rigging conſiderably damaged. When the danger of this accident was paſſed, mr. Howard, whoſe veſſel had not been touched, was much ſurpriſed to ſee the companions of his voyage going on a courſe, contrary to that which they had purſued before. He at firſt thought that fear had made them miſtake their direction, and that they would ſoon diſcover their error; but perceiving, that they ſtill continued to go on, and not being near enough to hail them, he followed their courſe. When he was near enough to ſpeak to them, he found that they were purſuing their voyage, as they thought, and ſailing upon that rhumb, which, according to their compaſs, was proper to conduct them to their place of deſtination. This miſtake proceeded from the poles of the needle being changed, the north pole having become a ſouth pole, and the ſouth pole a north. They turned the flower de luce with the finger, and pointed it directly north; but the moment it was left at liberty, it reſumed its former direction towards the ſouth. All the compaſſes in the ſhip were in the ſame ſituation; and this ſtrange accident could not be accounted for, but by attributing it to the thunder and lightning abovementioned. Mr. Howard was obliged to lend mr. Grafton a compaſs, to enable him to finiſh his voyage; but we are not told, whether thoſe, which had been affected in this manner, ever recovered their firſt direction*. We know alſo, that lightning having fallen upon the veſſel of captain Waddel, the poles of the needles of all his compaſſes were changed in the like manner, the north point turning always towards the ſouth.

To theſe proofs, we may add alſo a phenomenon long known to mariners. They have often had occaſion to remark irregular motions in the needle of the compaſs, during ſtormy weather; and ſometimes the cauſe of theſe agitations is ſo ſtrong, that the needle moves ſeveral times round the card.

Beſides, it is certain, that in the time of an aurora borealis, which is inconteſtibly a phenomenon of electricity, the needle is more or leſs agitated, and experiences moſt aſtoniſhing variations. The obſervations of ſeveral German, Engliſh and French philoſophers, leave us in no doubt of the truth of this ſingularity. I myſelf have remarked it ſeveral times. As a further proof, I ſhall here mention an obſervation made by father Cotte. This able philoſopher, on the 17th of September 1770, obſerving a continual agitation in the needle of his compaſs, which, every inſtant, varied from fifteen to twenty minutes, thought himſelf authoriſed, in conſequence of this, to announce an aurora borealis for the evening of that day; which, indeed, appeared not only at Paris, but in moſt of the countries of Europe. Since that period, he has announced others, and always with the ſame ſucceſs.

A conſtant remark which this careful obſerver has made, ſince he has followed the daily declination of the magnetic needle, is, that its variations are much greater and more frequent, on the approach of ſtormy weather. I have alſo obſerved, in certain caſes, that when ſtormy clouds paſſed over a building guarded by a large conductor, good magnetic needles, well ſuſpended, experienced very ſingular agitations.

Obſervations, analogous to the preceding, have been made on the electricity of volcanoes, the influence of which on the needle of a compaſs is very ſenſible. Father della Torre obſerved, that a magnetic needle was much agitated on the ſummit of mount Veſuvius. Mr. Brydone made the ſame remark on the

NOTE.

* Philoſophical tranſactions, 1655, No. 122.

top of mount Ætna. The needle, however, always pointed to the north; but on the top of the volcano, more time was requiſite for it to aſſume that direction than when it was at the bottom. Recupero, a man perfectly well informed of every thing which concerns Ætna, ſoon after the eruption of 1755, placed his compaſs in the lava, and, to his great aſtoniſhment, "the needle was agitated with much violence for a conſiderable time, until it entirely loſt all its magnetic virtue. It turned indifferently towards every point of the card, and did not recover its former property, without being again touched with the magnet."

Secondly, ſeveral direct experiments concur, alſo, to prove, that electricity has a very ſenſible influence over magnetiſm. Mr. Kinnerſley having placed the needle of a compaſs upon the point of a long pin, and held it in the atmoſphere of a prime conductor, at the diſtance of about three inches, found that it whirled round with great rapidity.

About the year 1751, dr. Franklin ſucceeded in giving to needles a polar direction by artificial electricity, and even of changing it at pleaſure. "A ſhock," ſays he, "given by four large glaſs veſſels in the form of jars, to a fine ſewing needle, floating in the water, gave it a magnetic direction, and it traverſed readily." If the needle be placed eaſt and weſt, at the time when it is ſtruck, the end, by which the electric fluid entered, points to the north. If it be placed north and ſouth, the end, which is turned towards the north, will continue to point north when it is put upon the water, whether the fluid entered by that end or by the other. It may, perhaps, be ſuperfluous to mention here, that when the maſſes, upon which one operates, are too large, or when the electricity is too weak, the experiment will not ſucceed, as happened to mr. Wilſon at London.

Mr. de Buffon was alſo one of the firſt, who thought that magnetiſm muſt be an effect of electricity, and this was the caſe a long time, before he was acquainted with the conjectures of the philoſopher of Philadelphia. In the beginning of the year 1752, this great man requeſted mr. d'Alibard to make him ſix needles of ſteel, that he might try to communicate the magnetic virtue to them by an electric ſhock. The method, which the latter purſued, was as follows. Having prepared, for the Leyden experiment, a large glaſs cucurbit and a matraſs, he put a needle, the cap of which had been taken off, between two plates of glaſs, the one longer than the other, in order that the two ends of the needle might extend beyond the edges of the latter. The whole was then put into a preſs made on purpoſe, placed in ſuch a manner, that it formed part of an electrical circle, or communicated at both ends with a machine; and the ſhock was diſcharged through it. The apparatus being then taken to pieces, the cap adjuſted, and the needle ſuſpended upon its pivot, it aſſumed a northern and ſouthern direction, and was ſtrongly attracted by a piece of iron preſented to it; in a word it had fully acquired the magnetic virtue.

Mr. d'Alibard immediately tried to change the poles of this needle, by giving it another ſhock in a contrary direction, and had the wiſhed-for ſucceſs.

The experiment, repeated ſeveral times, produced the ſame effects. This needle preſerved its magnetic virtue ſeveral months; but ſometime after its force decreaſed inſenſibly; it was even neceſſary, at that period, to hold a key within the diſtance of three or four lines from it, before it could be attracted. The ſame philoſopher conveyed the magnetic virtue, by the ſame means, to two other needles, which preſerved their force for a very conſiderable ſpace of time. They were ſtruck by a ſhock, given at the ſame inſtant by four large glaſs jars, prepared for the Leyden experiment.

Theſe effects give us reaſon to believe, that old bars of iron expoſed long to the injuries of the air, on the tops of very high buildings, ſuch as thoſe on the

steeples of Chartres, Aix, &c. would not acquire the magnetic virtue, were it not for the influence of natural electricity. However this may be, mr. d'Aibard remarked, that in whatever direction his needles were placed, when they received the shock, the end of the needle, by which the electric fluid entered, was that which constantly turned towards the north; and consequently the end, through which the fluid came out, directed itself towards the south. To change, therefore, the poles of a needle to which the magnetic virtue is communicated in this manner, nothing is necessary, but to give it a shock in a contrary direction.

From these proofs some philosophers have concluded, that electricity and magnetism are the same thing; but it appears to me, that they are wrong; for all, that we can thence conclude, is, that electricity produces magnetism in certain cases. Perhaps even this effect depends rather on the strong agitation and violent shock, which the electric fluid causes in the needle, than from any peculiar virtue. Mr. Van Swinden is of the same opinion. It is well known from mr. Réaumur's experiments, that iron immediately acquires the magnetic virtue, by the stroke and percussion of a common hammer.

Whatever truth there may be in this observation, it is certain, that if electricity resembles magnetism in a few points, there are a great many in which they differ, and which establish a very essential unlikeness. From these we shall select a small number, which will, undoubtedly, appear decisive. The electric fluid shows itself under the form of luminous sparks, but the faintest light could never yet be obtained from the magnetic fluid. The electric fluid is rendered very sensible by shocks and violent commotions; but it has never yet been possible to give the smallest shock by means of the loadstone. The electric fluid acts in in some manner or other upon every body, but the case is different with that of the magnet. The electric fluid communicates itself readily to all metals and semi metals, while the magnetic fluid acts only upon iron; for example, it has never been found practicable to communicate the magnetic virtue to a needle made of silver. The magnetic virtue is permanent in the loadstone, and in iron; the electric virtue, on the contrary, is almost instantaneous. If one approaches a bar of iron electrified, a simple touch immediately deprives it of its virtue; but however long or often one may touch an artificial magnet, it still retains its magnetism.

It would be easy to recount a great many more marks of difference, between the two fluids, of which I speak; but those, which I have mentioned, appear to be sufficient to refute the opinion of those, who assert their identity. From the observations and experiments, which I have related, it results, therefore, that there is a great difference between magnetism and electricity; consequently that they are not produced by the same agent and the same principle, unless we suppose the fluid, which is the cause of both, to be modified in a very different manner in each case; which would be equivalent to allowing that they are two distinct fluids.

If there be so great a difference, then, between magnetism and electricity, we ought not to conclude, that they are the same, or even analogous; otherwise there would be an analogy between bodies the most unlike; for we observe classic and generic marks of resemblance between them, which are not sufficient to establish a particular analogy. Therefore, until direct, repeated and well authenticated experiments force us to admit a real analogy between the electric and the magnetic fluids, we may rest assured, that they have not a certain, but a very vague and general identity or analogy.

Of a new method of copying or multiplying writings and drawings, lately diſcovered in Paris.

THIS method was for a long time kept ſecret; during which period every body was aſtoniſhed at it: but at preſent, thoſe who know it, juſtly think it not a very extraordinary improvement; however, though upon the whole it may not be generally proper or advantageous, it may certainly be of ſingular uſe in particular caſes.

What the inventor ſhowed to thoſe perſons who viſited him, was only a copperplate, upon which they were deſired to write, or to make a drawing, in the ſame manner as if they had been writing upon paper, and with a pen, and certain ink which was likewiſe produced by the inventor. As ſoon as the writing or drawing was finiſhed, he retired with the copperplate into another room, and in about an hour's time came out again with ſeveral copies upon paper, of the piece of writing or drawing which had been made upon the copperplate. The two ſurpriſing particulars were, the extraordinary ſimilarity between the original and the copies, and the copies being not the reverſe of the original. Without detaining the reader's curioſity any longer, we ſhall now deſcribe the proceſs, or at leaſt a proceſs capable of performing what has been mentioned above, with the utmoſt exactneſs.

The copperplate is covered with a ſlight coat of very ſoft varniſh, (a mixture of wax and tallow, in equal quantities, anſwers very well) and the ink conſiſts of a pretty ſtrong ſolution of fixed alkali in water, to which ſome lamp-black is added, merely to give it a little blackneſs. If then you write with this ink upon the varniſhed plate, the pen naturally ſcrapes off ſome of the varniſh, and, at the ſame time, the ink fills up the marks, and not only prevents the pieces of varniſh from falling into the lines again, but even helps to clean, by diſſolving the ſmall quantity of varniſh which the pen may have left here and there. This done, the copperplate is put into the aquafortis, in the uſual way of etching, after which the plate is cleaned; and the impreſſions are made after the uſual method; but, as theſe impreſſions are the reverſe of the original, it is neceſſary to take each impreſſion thus made, and to place it immediately upon another piece of wet paper; the two papers are paſſed between the rollers of the preſs, by which means the ſecond paper will be marked with an impreſſion ſufficiently ſtrong, and exactly like the original; ſo that the impreſſion firſt made, performs the office of copperplate with reſpect to the ſecond.

It is evident that this method conſumes a double quantity of paper, and requires a double time; but yet it may be of ſingular uſe when the real drawing of a painter is required to be exactly copied, or when ſeveral copies of a piece of writing are required in a ſhorter time than is neceſſary for accompliſhing a plate engraved in the uſual way.

ON CRUELTY TO ANIMALS.

IT were to be wiſhed, for the ſake of humanity, that the doctrine of tranſmigration, which was ſo firmly believed by many of the ancients, ſtill maintained itſelf in the world; as it would certainly reſtrain us from frequent acts of cruelty, to conſider, that the brute creation ſhould hereafter be raiſed to a more exalted ſphere of action, and that in doing violence to them, we offered an inſult to ſome future happy beings. But, though this notion has long ſince been generally exploded, yet, conſidered as mere brutes who are annihilated at death, they have many claims to our tenderneſs and compaſſion. The dominion which man has over them, is by no means abſolute; for thus his commiſſion runs: "rule with mercy; and ſlay not wantonly, but from neceſſity;" nay, however ſtrange the expreſſion may ſeem, their dependence on each other is mutual,

Wolves, lions, bears, and tigers, with innumerable other beaſts of prey, which are not ſubject to man's controul, make no claim on him for ſuſtenance and ſupport; but domeſtic animals, and thoſe whom nature hath placed more directly under his command, look up to him for daily food and protection, as a reward for their ſervices. Thus, as Pope juſtly obſerves,

> While man exclaims—"See all things for my uſe,"
> "See man for mine"—replies a pamper'd gooſe.

If, therefore, man is ſtiled the lord of the univerſe, he is more indebted for that flattering epithet to his mental powers and capacities, and the gift of ſpeech, than to his ſovereignty over the animal creation.

To become an advocate for brutes, while ſo many rational beings are deſtitute of the common neceſſaries of life, may, perhaps appear ridiculous and abſurd; but it is a truth too evident to be denied, that the power given over them is become ſo general, that their ſervices are often repaid, not by the methods which humanity dictates, but quite the reverſe. Beſides, who is ſo well prepared to lift up the fatal knife againſt his fellow being, as the man whoſe heart is grown callous by repeated acts of cruelty to his horſe or dog? Or who, it may reaſonably be aſked, ſo likely to join a banditti of aſſaſſins, as the wretch who can delight in the tortures of an inoffenſive animal; and, it might be added, if any further apology is neceſſary, that we cannot but be ſenſible a horſe endures pain from inceſſant laſhes of the whip, while the diſtreſſes of men are often feigned, and a pretext for the blackeſt ſcenes of iniquity; nor can the dignity of man be inſulted by this attempt, unleſs it is a degradation of his nature to implant the ſeeds of mercy and compaſſion. I intend to reſt the merits of the whole on this ſingle conſideration, viz. the benefits man receives from the animal world. Theſe are infinitely varied, according to the ſphere and capacity of the creatures from whom they are derived. The horſe is endued with ſtrength, beauty, and ſpeed; he contributes to the pomp, as well as the convenience of man; and by him we are carried from place to place with great velocity; yet is he ſo unconſcious of his ſtrength, that he ſubmits to the reins, ſtoops to correction, and becomes ſo docile, that a child may lead him. The ox, the ſheep, and the lamb, furniſh our tables with delicious and wholeſome repaſt: and we even take pride in that clothing which not long ago adorned them. The milk of the cow is adapted to anſwer the purpoſes of food, nouriſhment, and luxury; that of the aſs and goat is ſovereign in decays and conſumptions, affording that health and vigour to the patient, which was ſought from medicine in vain. The ſurly maſtiff, the fawning ſpaniel, the vigilant houſe-dog, and the ſwift footed hound, ſhould be remembered here, while

> Grimalkin, to domeſtic vermin ſworn
> An everlaſting foe, with watchful eye
> Lies nightly brooding o'er a chinky gap,
> Portending her fell claws to thoughtleſs mice
> Sure ruin. *Philips.*

The medicinal virtues of the viper and toad have been often experienced; the ant and bee afford ſtriking examples of diligence and induſtry; and all the toil of the latter is for the ſervice of man; to the crawling ſilkworm we are indebted for the moſt ſumptuous apparel; nor is it improbable, that other ſpecies of worms, which weave a texture ſimilar to, and whoſe transformations vary but little from it, may in future prove of equal importance to mankind. In ſhort, natural hiſtory ſupplies us with numberleſs other inſtances of creatures infinitely diverſified, who adminiſter to the eaſe, the ſafety, the ſplendor or ſupport of man. The feathered inhabitants of the air enliven the ſpring and ſummer months; the finny tribes of the ſea, beſides other ſervices, gratify the epicure's palate; and thoſe creatures, which are appointed to tread the ground,

afford pleaſure, food, and raiment; nor are we indebted to the animal creation only, as both the vegetable and mineral ſyſtems are replete with abundant bleſſings.

Reflect on this, thou lord of the earth; and let it humble thy pride to be thus laid under obligations to the meaneſt of creatures; yet muſt it not at the ſame time flatter thy vanity, to ſee all creation toiling for thy eaſe and happineſs; to ſee earth, air, and ocean united in thy intereſt? But let gratitude check thy vanity; let thy government be full of mercy, and ſuch thoughts as theſe continually attend thee. Are not all theſe creatures the production of the ſame benevolent power which called me into exiſtence? Do not they alſo receive from his bounty all they have, or are? Though placed in a more humble ſtation, does not each of them fulfil the intentions of nature concerning them? Are not their organs affected by pleaſure and pain, appetite and diſeaſe? Certainly, then, cruelty towards them is ingratitude towards heaven, an abuſe of its creatures, and of the power with which I am veſted.

I cannot help obſerving here, that there is an extreme on the contrary ſide, which, though a fault, nevertheleſs indicates a compaſſionate mind; and, it is natural to ſuppoſe, that where ſo much kindneſs to the animal ſpecies prevails, the human is far from being overlooked. I ſhall conclude this eſſay with an epitaph on a favourite dog; which breathes the language of an affectionate and tender heart:

Beneath this turf of graſs is laid
The fond, the gentle Mog;
Reader, upon him ſoftly tread,
Tho' he was but a dog.

Thus into death and darkneſs hurl'd,
Ah! muſt his kindneſs end,
Who bore good will to all the world,
But chiefly to his friend?

Fain would I hope thou liv'ſt at eaſe,
Or in a ſphere doſt move,
Where all like thee are fond to pleaſe,
And words expreſs their love,

For if, as ancient ſages taught,
Brutes after death aſſume
A different form, thy ſpirit ought
To wear the richeſt plume.

Important obſervations upon the ſhoals of Nantucket, for the benefit of thoſe who ſail to New England. Tranſlated from a French manuſcript.

FROM my obſervations on the charts of the North American ſeas, and books that treat of this navigation, I find that it is the general opinion that the Nantucket ſhoals, upon which the ſea breaks, are about twenty leagues in extent, and lie in 40 degrees of north latitude. Hence it is, that navigators begin to be alarmed, and take needleſs precautions, while yet a great diſtance off, which is frequently the occaſion of retarding the voyage conſiderably.

M. Dourville, an officer of long experience in the French navy, (and who, in the time of the late war, was upon the New England coaſts, in quality of lieut. of one of the ſhips belonging to the united ſtates, and is of the order of Cincin-

nati) made a diſcovery in 1787, which rectifies the miſtakes of former navigators.

Being maſter of the brigantine Two Siſters, and on his paſſage from St. Pierre, and Miquelon, to the French American iſlands, and finding himſelf near theſe famous ſhoals, which, like other navigators, he much dreaded; he ſounded, examined, and repeated his operations at his leiſure, ſailing round them ſeveral times, and making the neceſſary obſervations, with due regard to the ſafety of his veſſel and crew; and coming as near as was conſiſtent with prudence.—The following is the reſult of his examination: 1. The ſhoals are of a conical form, and where they are really dangerous, not more in extent than twenty fathoms, ſo that there is little more danger of a veſſel running accidentally upon them, than there is of running foul of another veſſel in the common route between France and America. 2. With regard to the ſoundings; M. Dourville found four fathoms a league diſtant from the point of the breakers; at the diſtance of two ſhips lengths from the ſame breakers, there were two and a half fathoms. 3. By ſeveral obſervations of the latitude of this ſhoal, taken with the moſt ſcrupulous exactneſs, at different times, it was found that the breakers lie in latitude 40 degrees, 35 minutes, and bearing about ſouth eaſt of Nantucket iſland.

The above is conformable to the report of M. Dourville, certified by him at Baltimore, July 12, 1791.

DELAMOTTE, conſul for the united ſtates at Havre-de-Grace.

MOON-SCRIP.

SOME worthy patriots have deviſed an additional ſource of national wealth and agrandizement, which in all probability will ſurpaſs the many already diſcovered in this young commonwealth, ſo highly favoured above all the old nations, in the ſcience of acquiring riches without labour! they mean to keep up, by means of *balloons*, an eaſy, quick, and conſtant intercourſe with the *moon*; and thereby to carry on a lucrative commerce with the people of that planet. Eſpecially is it their deſign to purchaſe landed eſtates there for our *bank-ſcrips*, *canal ſcrips*, and *national manufactory-ſcrips*. As the plan is abſolutely ſure, and the profits muſt be immenſe, the generous and enlightened freemen of the united ſtates will no doubt patronize the enterprize.

The underwritten directors will ſell 10,000 acres of the beſt lands for one ſhare in the national manufactory, and ſo in proportion for any other kind of paper money—even the *old congreſs dollars*—which after ſo many years degradation may now be changed into gold.

Though the moon probably contains 1,000 times more good land than our Kentucky; yet, as it will quickly be diſpoſed of on terms ſo advantageous, we ſincerely wiſh, that all who have the laudable ambition of becoming great, and of exalting their families to a ſplendid fortune, may ſpeedily apply. The firſt purchaſers will certainly in leſs than a fortnight gain 100 per cent. on their ſhares: for ſuch is now the NATIONAL SPIRIT, that the manufactory ſcrips are 50 dollars beyond par; though not a ſingle loom can be in motion for theſe ſix months: and every body knows how agreeably many have failed on the canals, which perhaps will never be dug in our days.

DOCTOR FAUSTUS, jun.
ALBERTUS MAGNUS, jun.

Obſervations on blindneſs, and on the employment of the other ſenſes to ſupply the loſs of ſight. By mr. Beew. From memoirs of the literary and philoſophical ſociety of Mancheſter. Continued from page 29.

THE influence of muſic is ſtill more generally to be obſerved than that of poetry. Muſic, almoſt without exception, appears to be the favourite amuſement of the blind. There is no other employment of the mind, religious contemplation excepted, that ſeems ſo well adapted to ſoothe the ſoul, and diſſipate the melancholy ideas, which, it may naturally be expected, will ſometimes pervade the diſpoſitions of thoſe who are utterly bereft of ſight. This, together with the beneficial influence that reſults from the practice of this delightful art, by quickening and perfecting the ſenſe of hearing, is a matter that deſerves the moſt ſerious attention. The celebrated profeſſor, juſt now mentioned, excelled in performing on the flute, in his youth; and the refinement of his ear has been very juſtly attributed to his early attention to muſic. It is not, therefore, ſurpriſing that ſo many blind people have diſtinguiſhed themſelves in this ſcience. Stanley and Parry were deprived of their ſight in early infancy: yet both theſe gentlemen have diſplayed extraordinary proofs of their abilities, not only as compoſers and performers of muſic, but likewiſe in matters, that, at a firſt view, we might be apt to conſider as peculiar to thoſe who are fully poſſeſſed of the faculty of viſion. Their ſeparate reputations, as muſicians, are ſufficiently known and acknowledged. The ſtile of Stanley is truly his own; and his execution on the organ, equal, if not ſuperior, to any of his cotemporary performers on that grand inſtrument. Parry may be revered as the Britiſh bard of modern times. The halls of the Cambrian chief reſound with the melodious vibrations of his harp, and he has united the refinements of taſte and elegance to the rude, but expreſſive modulations of antiquity.

I paſs over a number of inſtances, that might be offered to your notice, and proceed to give ſome account of dr. Henry Moyes, the elegant reader on philoſophical chemiſtry; whoſe lectures the greateſt part of this ſociety had the ſatisfaction of attending, and whoſe perſonal acquaintance ſeveral of us have enjoyed.

This intelligent philoſopher, like the celebrated profeſſor of Cambridge beforementioned, loſt his ſight by the ſmall-pox, in his early infancy. He never recollected to have ſeen: "but the firſt traces of memory I have," ſays he, "are in ſome confuſed ideas of the ſolar ſyſtem." He had the good fortune to be born in a country where learning of every kind is highly cultivated, and to be brought up in a family devoted to learning.

Poſſeſſed of native genius, and ardent in his application, he made rapid advances in various departments of erudition; and not only acquired the fundamental principles of mechanics, muſic, and the languages; but likewiſe entered deeply into the inveſtigation of the profounder ſciences; and diſplayed an acute and general knowledge of geometry, optics, algebra; of aſtronomy, chemiſtry; and in ſhort, of moſt of the branches of the Newtonian philoſophy.

Mechanical exerciſes were the favourite employments of his infant years. At a very early age he made himſelf acquainted with the uſe of edged tools ſo perfectly, that notwithſtanding his entire blindneſs, he was able to make little wind-mills; and he even conſtructed a loom, with his own hands, which ſtill ſhow the cicatrices of wounds which he received in the execution of theſe juvenile exploits.

By a moſt agreeable intimacy, and frequent intercourſe, which I enjoyed, with this accompliſhed blind gentleman, while he reſided in Mancheſter, I had an opportunity of repeatedly obſerving the peculiar manner in which he arranged his ideas, and acquired his information. Whenever he was introduced

into company, I remarked that he continued ſome time ſilent. The ſound directed him to judge of the dimenſions of the room, and the different voices, of the number of perſons that were preſent. His diſtinction, in theſe reſpects, was very accurate; and his memory ſo retentive, that he ſeldom was miſtaken. I have known him inſtantly recogniſe a perſon on firſt hearing him ſpeak, tho' more than two years had elapſed ſince the time of their laſt meeting. He determined pretty nearly, the ſtature of thoſe he was ſpeaking with, by the direction of their voices; and he made tolerable conjectures, reſpecting their tempers and diſpoſitions, by the manner in which they conducted their converſation.

It muſt be obſerved, that this gentleman's eyes were not totally inſenſible to intenſe light. The rays refracted through a priſm, when ſufficiently vivid, produced certain diſtinguiſhable effects on them. The red gave him a diſagreeable ſenſation, which he compared to the touch of a ſaw. As the colours declined in violence, the harſhneſs leſſened, until the green afforded a ſenſation that was highly pleaſing to him; and which he deſcribed as conveying an idea ſimilar to what he felt in running his hand over ſmooth poliſhed ſurfaces. Poliſhed ſurfaces, meandering ſtreams, and gentle declivities, were the figures by which he expreſſed his ideas of beauty. Rugged rocks, irregular points, and boiſterous elements, furniſhed him with expreſſions for terror and diſguſt. He excelled in the charms of converſation; was happy in his alluſions to viſual objects; and diſcourſed on the nature, compoſition, and beauty of colours, with pertinence and preciſion.

Dr. Moyes was a ſtriking inſtance of the power the human ſoul poſſeſſes, of finding reſources of ſatisfaction, even under the moſt rigorous calamities. Though involved "in ever-during darkneſs," and excluded from the charming views of ſilent or animated nature—though dependent on an undertaking for the means of his ſubſiſtence, the ſucceſs of which was very precarious—in ſhort, though deſtitute of other ſupport than his genius, and under the mercenary protection of a perſon, whoſe integrity he ſuſpected—ſtill Dr. Moyes was generally chearful and apparently happy. Indeed it muſt afford much pleaſure to the feeling heart, to obſerve this hilarity of temper prevail, almoſt univerſally, with the blind. Though "cut off from the ways of men, and the contemplation of the human face divine," they have this conſolation, they are exempt from the diſcernment, and contagious influence of thoſe painful emotions of the ſoul, that are viſible on the countenance, and which hypocriſy itſelf can ſcarcely conceal. This diſpoſition, likewiſe, may be conſidered as an internal evidence of the native worth of the human mind; that thus ſupports its dignity and cheerfulneſs under one of the ſevereſt misfortunes that can poſſibly befal us. Nor is this chearful reſignation peculiar to thoſe who have been blind from their birth; we find it alſo generally prevail with ſuch as have loſt their ſight, even at a more advanced age; and who muſt, undoubtedly, feel the misfortune with the utmoſt anguiſh. The diſtreſſing recollection, which memory muſt preſent, of former enjoyments, we find, however, ſoon ſubſides. Gentler and more pleaſing reflexions ſucceed. Contemplation takes her reſidence in her proper province, the human mind; and the blind ſubmiſſively and chearfully reſign themſelves to the will of heaven, and the benevolent protection of the leſs unfortunate of their fellow creatures. And hard, indeed, is the heart of him, who will not ſtretch out his hand to ſuccour the blind; or who, by injuſtice, illiberality, or unkindneſs, adds a ſting to the conſcious dependence, to which, while they live, they muſt ever be ſubjected.

The blind people I have hitherto ſelected to ſpeak of, it may be remarked, were ſuch as had their native faculties excited and matured by early and attentive education. But we ſhall find, even where education has been wanting, and

the blind left, in a great meaſure, to the ſimple exertions of nature, that the natural faculties themſelves make ſurpriſing efforts towards ſupplying the deficiency of ſight. I ſhall bring forward to your notice a perſon well known in this neighbourhood, of which he is a native. This is one John Metcalf, who, like the gentleman already mentioned, became blind at a very early age, ſo as to be entirely unconſcious of light and its various effects. This man paſſed the younger part of his life as a waggoner, and occaſionally as a guide in intricate roads during the night, or when the tracks were covered with ſnow. Strange as this may appear to thoſe who can ſee, the employment he has ſince undertaken is ſtill more extraordinary: it is one of the laſt to which we ſhould ſuppoſe a blind man would ever turn his attention. His preſent occupation is that of a projector and ſurveyor of highways in difficult and mountainous parts. With the aſſiſtance only of a long ſtaff, I have ſeveral times met this man traverſing the roads, aſcending precipices, exploring valleys, and inveſtigating their ſeveral extents, forms, and ſituations, ſo as to anſwer his deſigns in the beſt manner. The plans which he deſigns, and the eſtimates he makes, are done in a method peculiar to himſelf; and which he cannot well convey the meaning of to others. His abilities, in this reſpect, are, nevertheleſs, ſo great, that he finds conſtant employment. Moſt of the roads over the Peak in Derbyſhire have been altered by his directions, particularly thoſe in the vicinity of Buxton: and he is, at this time, conſtructing a new one betwixt Wilmſlow and Congleton, with a view to open a communication to the great London road, without being obliged to paſs over the mountains*. Theſe inſtances will, I am perſuaded, be ſufficient to prove, how effectually, by proper exerciſe, the other ſenſes may be refined and perfected, ſo as, in many reſpects, to ſupply the loſs of ſight. The ſenſations of ſmell and taſte, indeed, are ſo very limited, that they do not ſeem capable of yielding many peculiar advantages to blind people: but the perceptions of hearing and touch, as we have ſeen, may be applied to purpoſes wonderfully extenſive. *(To be continued.)*

Extent of London—contraſt between the city and the weſt end of the town—peculiarities in the houſes, and public buildings—the pavement—aſſurance of houſes.

From Archenholz's picture of England.

THIRTY years ago, it was difficult to aſcertain whether London or Paris was the largeſt city. Since, however, they have preſcribed certain bounds to the latter, which they are not allowed to exceed, and this wiſe regulation has not yet been adopted in the metropolis of England, which every day receives a new increaſe of buildings; it cannot now be doubted that the Engliſh have the misfortune to poſſeſs a capital infinitely more extenſive than the French. That which adds not a little to its magnitude, is the great number of large villages, which ſerve as country houſes; and which being incorporated, as it

NOTE.

* Since this paper was written, and had the honour of being delivered to the ſociety, I have met this blind projector of the roads, who was alone, as uſual; and among other converſation, I made ſome enquiries reſpecting this new road. It was really aſtoniſhing to hear with what accuracy he deſcribed the courſes, and the nature of the different ſoils, through which it was conducted. Having mentioned to him a boggy piece of ground it paſſed through, he obſerved, that "that was the only place he had doubts concerning; and that he was apprehenſive they had, contrary to his directions, been too ſparing of their materials."

were, with the ſuburbs of the town, form with it a monſtrous aggregate, to which there are neither limits nor regulations. No leſs than forty three thouſand new houſes were built, between 1762 and 1779.

Some enlightened patriots have attempted to ſtop this evil, which is continually increaſing. "It is madneſs," ſay they, "thus to *roof* all the county of Middleſex with tiles." The ſagacious North thought proper to impoſe a duty on bricks; but far from attaining the end propoſed, the rage for building ſeemed only to increaſe. The projectors were not in the leaſt frightened with this tax: being certain of always finding inhabitants, they only became anxious to make their houſes more agreeable and commodious than formerly.

For theſe twenty years paſt, an actual emigration has taken place from the eaſtern parts of London towards the weſtern; thouſands have left the former, where they do not erect new buildings, for the latter, where the moſt fertile fields and moſt agreeable gardens are daily metamorphoſed into houſes and ſtreets.

The city, eſpecially the houſes along the banks of the Thames, is compoſed of old ruins: the ſtreets are narrow, obſcure, and badly paved: it is the reſidence of the ſeamen, of the workmen employed in ſhip building, and of a great part of the Jews who reſide in London. The contraſt between that and the weſtern parts of the metropolis, is aſtoniſhing: the houſes there are almoſt all new, and of an excellent conſtruction; the ſquares are magnificent; the ſtreets are built in ſtraight lines, and perfectly well lighted: no city in Europe is better paved. If London were equally well built, no place in the whole world would be comparable to it.

It is a ſingular circumſtance, and one that no traveller has ever remarked, that the weſtern diviſion of London, which is in extent more than half the capital, and which is entirely ſeparated from the city, has not as yet received any name. When the citizens ſpeak of any particular part of it, they content themſelves with mentioning the name of the ſtreet; and when they talk of the whole, they term it—the other end of the town. Foreigners and geographers do wrong in calling this prodigious aſſemblage of ſtreets and ſquares, Weſtminſter; that diſtrict does not form a tenth of it; all the reſt is included in that of Middleſex.

As every thing in that country is ſingular, it is not in the leaſt ſurpriſing that the capital ſhould be placed in different counties, and each particular portion of it has a diſtinct juriſdiction.

The city, which is the ſmalleſt diviſion of London, has its own magiſtrates; all the reſt is governed by juſtices of the peace, which gives occaſion to a remarkable difference in the police. In the former it is more ſevere and exact; the love of order and induſtry is alſo more perceptible.

Two towns, a hundred leagues diſtant from each other, cannot have leſs reſemblance than there is between the city and the other parts of London. The form of government—the regulations—the privileges—the taſte and arrangement of the houſes—the manner of living—every thing, in one word, renders this difference remarkable.

The citizens are repreſented in parliament by four members, whom they alone elect. The other inhabitants of the metropolis, according to the diſtricts which they inhabit, vote for Middleſex, Surry, Kent, and Weſtminſter.

During the fire in 1666, thirty thouſand four hundred houſes, eighty-ſeven churches, and twenty-ſix hoſpitals in the city, were conſumed by the flames. Of this terrible devaſtation no trace now remains: but as every perſon was anxious to rebuild his dwelling houſe, neceſſity made them neglect to make the buildings either regular or convenient. From thence proceed the number of ill-formed maſſes of brick and mortar, dark and without taſte—the crooked and

narrow ſtreets, and the obſcure ſituation of the churches and other public edifices: faults which have been carefully avoided in the weſtern parts of the capital.

The churches eaſtward of Temple Bar are heaped upon one another; they have all been rebuilt on their ancient foundations; and one would imagine, from their numbers, that London was formerly compoſed of chapels and convents. Weſt of Temple Bar, on the other hand, there are very few: the zeal to lodge themſelves ſeems more to have influenced the inhabitants, than the deſire to erect places of worſhip for the Deity. In ſome parts, there are ſix thouſand houſes to one pariſh church.

The ſhops are open by eight o'clock every morning in the city; all is then in motion, every body is at work; while, on the other hand, at the court end of the town, the ſtreets are empty, the houſes ſhut, and even the very domeſtics are aſleep; the ſound of coaches is not heard, and one ſeems to walk about in a place that has been deſerted. This difference, which extends to drinking and eating, amuſements, dreſs, and manner of expreſſion, occaſions a kind of hatred between the inhabitants of each. Thoſe in the city charge the people who live at the weſt end of the town with luxury, idleneſs, effeminacy, and an attachment to French faſhions; while the others ſpeak of a citizen as a dull, fat animal, who places all his merits in his ſtrong box.

But it is more eſpecially when the lord mayor, ſheriffs, and common council have an audience at St. James's, to preſent a petition, or compliment his majeſty on ſome great event, that the courtiers attempt to ridicule them. One may eaſily imagine, that a ſimple tradeſman, totally unacquainted with the modes and cuſtoms of a court, will not be able to acquit himſelf on ſuch ſolemn occaſions with the eaſe of a courtier, who has made etiquette his chief and his only ſtudy, and who looks upon it as the moſt intereſting and the moſt uſeful of all accompliſhments.

This antipathy is ſo notorious, that it is mentioned in ballads, noticed on the ſtage, and is not forgotten even in the parliament itſelf. In Italy, they would arm themſelves with poignards, and ſpill each others' blood on a ſimilar occaſion; but ſo far from being attended with fatal conſequences in England, it ſerves only to baniſh the ſpleen of the nation.

The Engliſh nobility generally live three quarters of the year in the country. This ancient cuſtom of ſtaying but a ſhort time in the capital, is the reaſon why there are ſo few magnificent manſions in London. It is obſerved, however, that the metropolis having lately acquired more attractions, people of diſtinction now reſide there longer than they were wont to do: however, they ſtill look on their country ſeats as their principal habitations.

Many families who have twenty thouſand a year, have but a few apartments in town; and, as they keep a prodigious train of ſervants, are of courſe confined in regard to room. In a ſhort time this inconvenience will no longer exiſt, as a number of people of faſhion are now building ſuperb palaces.

It may be thought that this cuſtom is encouraged by government: but although the chief deſign of all courts be, to draw around them the greater part of the nobility, to add to their ſplendor, and take away from them the power of raiſing diſturbances in the provinces; I am, however, of opinion, that nothing but the pleaſures of the metropolis influence the Engliſh.

The nation already begins to be leſs attached to hunting, and to feel a greater paſſion for the fine arts, and every thing that can add to the pleaſures of a ſenſual life. It is alſo certain, that the next generation of the nobility will reſide, like thoſe of France, entirely in the capital. When one conſiders that, ſince this cuſtom has prevailed, thoſe commotions which the great uſed formerly to foment, have altogether ſubſided; and that in England and Poland alone, where

the nobility reſide on their eſtates, diſturbances of this kind have happened in the preſent age; it muſt be allowed, that luxury, againſt which ſo much declamation prevails, has been attended with at leaſt ſome good conſequences.

This new inclination, by which the wealthy are induced to live in London, has given to projectors the idea of building large ſtreets, and extenſive ſquares, adorned with excellent houſes. Theſe houſes, which may be regarded as ſo many palaces, are very lofty, exceedingly commodious, and have each of them two ſtories under ground, to which ſufficient light is communicated, by means of a fore court. The ſervants are lodged, and the kitchen, ſtore rooms, &c. are placed there, ſo that the reſt of the houſe is entirely at the diſpoſal of the maſter.

The builders have generally a leaſe of ninety-nine years, and at the end of that term are obliged either to give up the premiſes, or renew the agreement on paying a fine. The duke of Portland has eight thouſand buildings erected in this manner on his eſtate in the neighbourhood of town.

It is to this cuſtom that the want of ſolidity in the houſes, and the few maſter-pieces of architecture which we meet with in London, may be fairly attributed. If this reaſon did not exiſt, rich individuals would glory in decorating the capital of their native country. However, the diſadvantage is in a great meaſure recompenſed by the commodiouſneſs of the buildings.

Every houſe is abundantly ſupplied with water, by means of pipes, which diſtribute it to all the ſtreets in London. This profuſion is of the greateſt uſe in caſe of fire, by placing the engines ſo as to receive a conſtant ſupply. One need never be afraid of ſcarcity of this precious commodity; for, not contented with making the Thames to run through all parts of the town, they have brought the New River from the county of Hertford for the ſame purpoſe. By means of engines at London Bridge they raiſe the river to a prodigious height, and then circulate it through wooden pipes.

They are careful in England not only to inſure their houſes and their ſhops, but even public buildings, ſuch as churches, hoſpitals, and theatres. This precaution is not uſed in Paris, notwithſtanding its boaſted regulations are raiſed to the ſkies. Any one may alſo inſure his goods and wardrobe; nay, every thing but his ready money. This excellent eſtabliſhment is however ſometimes abuſed: more than one rogue has burnt his own houſe; and as this kind of crime is very difficult to be proved, the office is generally obliged to pay the amount of the demand. Immediately after the fire, the aſſurers become entitled to their money, having firſt tranſmitted the amount of their loſſes, and atteſted the ſtatement by an oath. Notwithſtanding the number of houſes annually conſumed in London by the flames, a mere trifle is given for the riſk: it is uſually no more than in the proportion of half a crown for a hundred pounds.

By means of large foot-ways of hewn ſtone, the paſſengers, without being incommoded by the horſes and carriages, paſs freely along. No coachman, under the penalty of twenty ſhillings, dares to drive upon this, or touch the kirb ſtone, even if he is obliged to wait whole hours. Conſiderable ſums are appropriated towards the repairing of theſe excellent foot-ways; a regulation at once ſingular and wiſe, prevents the pavement from being hurt, as the carts, waggons, &c. are now obliged to make uſe of wheels with rims ſix inches in diameter. Theſe, ſo far from hurting the ſtreets, make them more firm, and, in a certain degree, repair the damages which the chariots, coaches, and other light carriages have occaſioned.

A diſſertation on porter, read before the medical ſociety of South-Carolina, on the 28th of May 1791. *By dr. Budd.*

Mr. Preſident, and gentlemen,

AGREEABLE to your orders at the laſt meeting of the ſociety, I now riſe to give you my ſentiments on porter. By porter, I mean that vinous fermented liquor, made in London, of a particular kind of malt, with the Thames water. Was this porter made of good water, perhaps it would be equal to any beer in the world; but the Thames water taken up at the city of London, is a compoſition of all kinds of filth that the power of the human mind can conceive. Stinking meat and fiſh, with the blood and garbage from the butchers' ſlaughter-houſes, kept till they are full of vermin—the carcaſes of every ſpecies of dead animals—the ſaliva, dreſſings, and diſagreeable matter from the hoſpitals and lungs of five or ſix thouſand conſumptive perſons—the excrements from above a million of human beings, and perhaps twice that number of other animals, are diſcharged by a number of common ſewers that run through the city into the Thames, and form this baſe compoſition which permit me to call the eſſence of porter. Perhaps there may be ſome propriety in the name, as it is this filthy collection which gives the London porter the particular flavour that makes it ſo much admired by the lovers of that liquer. Is it unreaſonable to ſuppoſe, that uſe can make ſuch a taſte agreeable, when we ſee with how much pleaſure ſome men chew tobacco? Was the eſſence of porter the worſt ingredient in it, it might, perhaps, be wholeſome; the boiling would evaporate the volatile alkaline ſalts, and at leaſt make it ſmell better. But it is well known, the city of London is the greateſt manufacturing place in England, where immenſe quantities of linen, woollens, cottons, ſilks, &c. are made, and brought from other places to be dyed and fitted for market. Theſe dyes are known to conſiſt of animal, vegetable and mineral poiſons. On going down the river through the city, you will ſee the channels diſcharging the dye ſtuff of every colour into it, in (perhaps I may ſay with truth) ſeveral hundred places, beſides the great quantity brought by the common ſewers, mixed with the eſſence of porter, which, near low water, ruſhes in like a torrent. This, mixed with the paint, ruſt of lead, and copper, waſhed from above an hundred thouſand houſes, the poiſons thrown from the elaboratories of the chemiſts, the druggiſts, and apothecaries ſhops, have ſcarce time to mix with the Thames, before they are raiſed by the waterworks under London bridge, thrown up into a reſervoir, and conveyed by pipes into the brew-houſes and cellars of the inhabitants; when the water enters the tubs in the cellars, it is full of the eſſence of porter: but let it ſtand ten or twelve hours, the filth precipitates, the diſagreeable ſmell evaporates, and the water in the upper part of the tub appears clean. If you make uſe of a cloſe ſtool pan over night, fill it with good water, mix it well together, and let it ſtand till morning, it will then appear much like the Thames water in the tubs. After the tubs have been filled three or four times, they are taken out, emptied, and waſhed. When this is done, there is found a large quantity of the moſt ſtinking, filthy, diſagreeable matter, that had covered the bottom ſeveral inches deep. I ſhall now proceed to anſwer every thing I have heard in favour of London porter, or the water it is brewed with.

"Every body knows the Thames water is the beſt in the world." If every body means only the lower claſs of inhabitants of the city of London, the aſſertion is true; or at leaſt they think they know it, which to them is much the ſame thing; but if every body includes men of ſenſe, the aſſertion is falſe. Can any man of ſenſe believe that the Supreme Being has conſtructed better clouds to diſcharge the water near the head of the Thames, than elſewhere, or that he has made a ſuperior kind of earth to ſtrain it through? No, ſir, to the philoſophic

mind, the water at the head of that river muſt appear exactly the ſame as the water at the head of the Rhine, the Rhone, the Danube, or the Shannon in Europe; or the Delaware, the Patowmack, or the Congaree in the united ſtates.

When the river Thames was much wider at London than it is now, and there was not above a thouſand inhabitants in it, I ſuppoſe the water was equal to any in England, which, an Engliſhman will tell you, is ſuperior to any thing in the world. Nay, ſo ſtrong are the prejudices of the lower claſs, that they believe England to be the beſt country in the world; that their native ſhire or county is the beſt in England, and that the ſmall town they were born in, exceeds any part of that ſhire or county. Thus each individual enjoys the pleaſure of being born on the beſt ſpot on the face of the earth. It is alſo believed in England, that one Engliſhman is able to beat three Frenchmen, although a very candid Engliſh author ſays, "On a full inveſtigation of the matter, he finds that one Engliſhman is not able to beat more than two Frenchmen of equal ſtrength, activity and courage; and (ſays he) every body knows, a Frenchman may be as active, as brave, and as ſtrong as an Engliſhman." I mention theſe two caſes to ſhow how far prejudices may get the better of the human mind. When once the inhabitants believed the Thames water was the beſt in the world, as the city grew, the prejudice grew with it, although every addition to their number, and every encroachment on the river, had a tendency to make it worſe. It is now about three hundred yards wide at the city, with three large bridges (I may ſay in it) to prevent the continual and inexhauſtible influx of the eſſence of porter, paint and dye ſtuff from running off; yet there are ſome ſo infatuated as to believe this diſcharge from Pandora's box, to be the beſt water in the world. My God, where is the boaſted ſuperiority of man to the brute creation! The horſe, by inſtinct, knows the wholeſome graſs, and the dog knows his phyſic; but man, proud man, with his boaſted reaſon, will ſwallow the worſt of poiſons, and turn again, and devour his own excrement!

"That the Thames water keeps better at ſea than any other," is an argument advanced in its favour. This almoſt every American ſailor will tell you is not true: and the number of voyages lately made from the united ſtates to China, without a drop of Thames water, and the particular healthy ſtate of the ſeamen, is a convincing proof that this is an Engliſh or a London prejudice.

"When a bung is taken out of a caſk of Thames water, there is ſo much ſpirit in it, that it will flaſh like gunpowder, if you apply a candle to it." This may be true and eaſily accounted for*; although the ſhips take up their water

NOTE.

* Inflammable air. We owe the knowledge of the exiſtence, and of ſome remarkable properties of this air, to mr. Cavendiſh, by whom they were firſt publiſhed in 1767. Its effects, however, had long before been fatally experienced by miners, in whoſe ſubterraneous habitations it is often collected in ſuch quantities as to produce the moſt dreadful effects. It is produced in abundance from putrid, animal, and vegetable ſubſtances, and in general by all thoſe that part with their phlogiſton eaſily. By itſelf it is very noxious, and will inſtantly put an end to animal life. Its great inflammability in this ſtate, renders it very dangerous to bring any light, or even to ſtrike a flint with ſteel in thoſe places where it abounds. Beſides the ſubterraneous places already mentioned, this kind of air is found in ditches, over the ſurface of putrid waters, out of which it eſcapes; in burying places; in houſes of office, where putrid animal and vegetable matters are accumulated; and as putrefaction thus ſeems to be

below the city, and at the height of the tide, when the common ſewers are cloſed, yet it contains ſo much of the eſſence of porter, of which phoſphorus is made, that it is no wonder it will flaſh like gunpowder. But were they to take it with the laſt of the ebb or the firſt of the flood, when the porter breweries are ſupplied with water, it would contain ten times the filth, and perhaps flaſh ten times as much.

"The citizens of London uſe this water in their beer, their tea, their bread, &c. are not they healthy?" Whoever will examine the bills of mortality for twenty years paſt, will find the deaths in London exceed the births near one tenth; above half that are born, die under ten years old; and one half of theſe die of convulſions occaſioned by the mothers drinking porter caudle in childbed, and plenty of it while they ſuckle, under pretence of making milk for the children; the poiſonous particles of the paint and dye ſtuff, are conveyed to the bowels of the tender infant, irritate the nerves, bring on violent griping pains, convulſions, and death. In this manner one fourth that are born, within the bills of mortality, make their untimely exit within a year; one half that die above ten years old, die of conſumptions. For twenty years paſt, there have been born in London, a little more than nineteen thouſand children, one year with another. The deaths in the ſame time, are on an average near twenty one thouſand; of theſe it will be found, that between five and ſix thouſand die of convulſions, and about the ſame number of conſumptions. As far as has been in my power to examine, I have found the births to exceed the deaths in the city of Paris: this is the difference between drinking wine and porter. A late author informs us, "that the proviſion is good and wholeſome, and the city of London is placed in a healthy ſituation, and yet conſumptions prevail there more than in any part of the world." His local prejudice was too ſtrong for him to diſcover that the bane of the city was the Thames water, which, from his infancy, he had been taught to believe was the beſt in the world. It has been aſſerted, that the ſulphureous ſmell of the coal, gives the inhabitants of the city of London the conſumption, &c. In my opinion, the fires have rather a tendency to cleanſe and purify the putrid air of the city, than make it worſe. Birmingham conſumes more coal in proportion to its number than London; they work in ſilver, lead, copper, and mercury; the ruſt and fumes of theſe metals are well known to be very deſtructive to the human ſpecies: yet they are not one fourth part as much afflicted with conſumptions as the Londoners. It has been ſaid, all large cities are more unhealthy than country places; and that the city of Edinburgh abounds with conſumptive patients. Permit me to aſk, whether that city is remarkable for cleanlineſs, or whether it is not full of that which the Lord commanded Moſes, to order the Jews to carry a paddle on their weapons and turn again and cover? Is not the air of Edinburgh replete with the putrid volatile particles of the eſſence of porter, eſpecially in the morning, when the human body is moſt expoſed to contagion? Is it not probable that the lungs may be injured in the firſt inſtance by the diſagreeable ſmell? Inflammatory diſeaſes of the lungs, are more common in a cold climate than warm; may not the firſt cauſe of conſumptions in Edinburgh, proceed from pluriſies, peripneumonies, &c. I know that conſumptions often ſucceed pulmonary complaints in the northern ſtates, where they are both ten times as common as they are in Charleſton. Perhaps, to gentlemen fond of theory, there are more unreaſonable conjectures,

NOTE.

the principle of inflammable air, it thence happens, that much more of it is produced in warm than in cold climates: but mr. Cavallo informs us, that it may be plentifully procured in all the ponds about London.

[American Encyclopædia, vol. 1. p. 171.]

than to ſuppoſe that moſt of the conſumptions in London are brought on by poiſonous mineral particles in porter, wounding the minute veſſels in the coats of the ſmall arteries and veins, that are too fine to be ſeen by the naked eye. Here obſtructions, inflammations, and ſuppurations may be formed, the ſharp, corroſive matter may be abſorbed into the blood, and carried by circulation into the lungs, wound the tender veſſels and bring on incurable conſumptions.

Some ſay, "they know the Thames water is as bad as here deſcribed, but all the beer in London is brewed with the new river water." The new river was brought from Hertfordſhire to a baſon near Iſlington, in the laſt century. But if we can believe the Roman and Engliſh hiſtories, beer was uſed by the ancient Britons before the conqueſt; moſt of the brew houſes are ſo far from the new river, that it would be very impracticable for them to uſe that water; ſhould they attempt it, more malt muſt be uſed to make it equally ſtrong, and ſupply the place of the eſſence of porter, and then it would not have that much eſteemed flavour. It has been ſaid, that in the northern ſtates, they have found a method of burning a little malt to give their porter the true London flavour; but ſome of the beſt connoiſſeurs, after ſeeing the bottles and method of corking them, ſay they can diſcover the cheat by the taſte. It is ſuppoſed by ſome, that boiling, fermenting, and clarifying, purifies the porter. Boiling evaporates the volatile ſalts, and comminutes the ſmall metallic particles, and makes them fitter to be ſuſpended in the beer, which is a ſubſtance much thicker than water: but the more you boil it, the ſtronger it will be of the mineral poiſons. Fermentation adds nothing to it; nor does it take any thing from it. The ſweet taſte of the wort is changed into the vinous taſte of porter. It does not precipitate any of the deleterious particles to the bottom, nor raiſe them to the top, or the yeaſt would poiſon thoſe who eat the London bread.

Perhaps it would be well if nothing worſe could be ſaid of clarifying the London porter. If common fame may be believed, it is not the better for that operation; but as I have ſtrictly confined myſelf to facts, it would not be right now to give you looſe reports.

I now come, mr. Preſident, to the ſtrongeſt argument I have heard. "But I love it." Perhaps this argument ſupports all other arguments, and is an argument not to be confuted by any arguments. Only permit me to ſay, he that will gratify his taſte, in preference to preſerving his health, may be permitted to follow his own inclination without the leaſt danger of injuring his country. It ſometimes happens, that thoſe who have come forward to oppoſe old eſtabliſhed prejudices, have laid themſelves open to ridicule and ſatire; but if any thing I have ſaid, will have a tendency to ſave the life of a ſingle member of this ſociety, I am willing to riſk every conſequence.

The art of procuring pleaſant dreams. By dr. Franklin.

Inſcribed to miſs * * * * * *. Being written at her requeſt.

AS a great part of our life is ſpent in ſleep, during which we have ſometimes pleaſing and ſometimes painful dreams, it becomes of ſome conſequence to obtain the one kind, and avoid the other; for, whether real or imaginary, pain is pain, and pleaſure is pleaſure. If we can ſleep without dreaming, it is well that painful dreams are avoided. If, while we ſleep, we can have any pleaſing dreams, it is, as the French ſay, *tant gagné*, ſo much added to the pleaſure of life.

To this end, it is, in the firſt place, neceſſary to be careful, in preſerving

health, by due exerciſe and great temperance; for, in ſickneſs the imagination is diſturbed; and diſagreeable, ſometimes terrible ideas are apt to preſent themſelves. Exerciſe ſhould precede meals, not immediately follow them; the firſt promotes, the latter, unleſs moderate, obſtructs digeſtion. If, after exerciſe, we feed ſparingly, the digeſtion will be eaſy and good, the body lightſome, the temper chearful, and all the animal functions performed agreeably. Sleep, when it follows, will be natural and undiſturbed. While indolence, with full feeding, occaſion night mares, and horrors inexpreſſible; we fall from precipices, are aſſaulted by wild beaſts, murderers, and demons, and experience every variety of diſtreſs. Obſerve, however, that the quantities of food and exerciſe are relative things: thoſe who move much may, and indeed ought to, eat more: thoſe who uſe little exerciſe, ſhould eat little. In general, mankind, ſince the improvement of cookery, eat about twice as much as nature requires. Suppers are not bad, if we have not dined; but reſtleſs nights naturally follow hearty ſuppers, after full dinners. Indeed, as there is a difference in conſtitutions, ſome reſt well after theſe meals; it coſts them only a frightful dream, and an apoplexy, after which they ſleep till doomſday. Nothing is more common in the newſpapers, than inſtances of people, who, after eating a hearty ſupper, are found dead abed in the morning.

Another means of preſerving health, to be attended to, is the having a conſtant ſupply of freſh air in your bed-chamber. It has been a great miſtake, the ſleeping in rooms exactly cloſed, and in beds ſurrounded by curtains. No outward air that may come in to you, is ſo unwholeſome as the unchanged air, often breathed, of a cloſe chamber. As boiling water does not grow hotter by longer boiling, if the particles that receive greater heat can eſcape: ſo living bodies do not putrify, if the particles, as faſt as they become putrid, can be thrown off. Nature expels them by the pores of the ſkin and lungs; and, in a free open air, they are carried off; but in a cloſe room, we receive them again and again, though they become more and more corrupt. A number of perſons, crowded into a ſmall room, thus ſpoil the air in a few minutes, and even render it mortal, as in the Black Hole at Calcutta. A ſingle perſon is ſaid to ſpoil only a gallon of air per minute, and therefore requires a longer time to ſpoil a chamber full; but it is done, however, in proportion, and many putrid diſorders hence have their origin. It is recorded of Methuſalem, who, being the longeſt liver, may be ſuppoſed to have beſt preſerved his health, that he ſlept always in the open air; for, when he had lived 500 years, an angel ſaid to him, "Ariſe, Methuſalem, and build thee an houſe, for thou ſhalt live yet 500 years longer." But Methuſalem anſwered and ſaid, "If I am to live but 500 years longer, it is not worth while to build me an houſe—I will ſleep in the air as I have been uſed to do." Phyſicians, after having for ages contended, that the ſick ſhould not be indulged with freſh air, have at length diſcovered, that it may do them good. It is therefore to be hoped, they may, in time, diſcover likewiſe, that it is not hurtful to thoſe who are in health; and that we may be then cured of the *aerophobia* that at preſent diſtreſſes weak minds, and makes them chooſe to be ſtifled and poiſoned, rather than leave open the window of a bedchamber or put down the glaſs of a coach.

Confined air, when ſaturated with perſpirable matter,* will not receive more: and that matter muſt remain in our bodies, and occaſion diſeaſes: but it gives ſome previous notice of its being about to be hurtful, by producing certain uneaſineſſes, ſlight indeed, at firſt, ſuch as, with regard to the lungs, is a trifling

NOTE.

* What phyſicians call the perſpirable matter, is that vapour which paſſes off from our bodies, from the lungs, and through the pores of the ſkin. The quantity of this is ſaid to be five-eighths of what we eat and drink.

ſenſation, and to the pores of the ſkin, a kind of reſtleſsneſs, which is difficult to deſcribe, and few that feel it know the cauſe of it. But we may recollect, that ſometimes on waking in the night, we have, if warmly covered, found it difficult to get aſleep again. We turn often without finding repoſe in any poſition. This figettineſs, to uſe a vulgar expreſſion, for want of a better, is occaſioned wholly by an uneaſineſs in the ſkin, owing to the retention of the perſpirable matter—the bedclothes having received their quantity, and being ſaturated, refuſing to take any more: to become ſenſible of this, by an experiment, let a perſon keep his poſition in the bed, but throw off the bedclothes, and ſuffer freſh air to approach the part uncovered of his body; he will then feel that part ſuddenly refreſhed; for the air will immediately relieve the ſkin, by receiving, licking up, and carrying off the load of perſpirable matter that incommoded it. For every portion of cool air that approaches the warm ſkin, in receiving its part of that vapour, receives therewith a degree of heat, that rarefies and renders it lighter, when it will be puſhed away, with its burden, by cooler, and, therefore, heavier freſh air; which, for a moment, ſupplies its place; and, then, being likewiſe charged, and warmed, gives way to a ſucceeding quantity: this is the order of nature, to prevent animals being infected by their own perſpiration. He will now be ſenſible of the difference between the part expoſed to the air, and that which, remaining ſunk in the bed, denies the air acceſs: for this part now manifeſts its uneaſineſs more diſtinctly by the compariſon; and the ſeat of the uneaſineſs is more plainly perceived, than when the whole ſurface of the body was affected by it.

Here, then, is one great and general cauſe of unpleaſing dreams: for, when the body is uneaſy, the mind will be diſturbed by it; and diſagreeable ideas of various kinds, will, in ſleep, be the natural conſequences. The remedies, preventive and curative, follow:

1. By eating moderately, (as before adviſed for health's ſake) leſs perſpirable matter is produced in a given time; hence the bedclothes receive it longer before they are ſaturated; and we may, therefore, ſleep longer, before we are made uneaſy by their refuſing to receive any more.

2. By uſing thinner and more porous bedclothes, which will ſuffer the perſpirable matter more eaſily to paſs through them, we are leſs incommoded, ſuch being longer tolerable.

3. When you are awakened by this uneaſineſs, and find you cannot eaſily ſleep again, get out of bed, beat up and turn your pillow, ſhake the bedclothes well, with at leaſt twenty ſhakes, then throw the bed open, and leave it to cool; in the mean while, continuing undreſt, walk about your chamber, till your ſkin has had time to diſcharge its load, which it will do ſooner, as the air may be drier and colder. When you begin to feel the cold air unpleaſant, then return to your bed; and you will ſoon fall aſleep, and your ſleep will be ſweet and pleaſant. All the ſcenes preſented to your fancy will be of the pleaſing kind—I am often as agreeably entertained with them, as by the ſcenery of an opera. If you happen to be too indolent to get out of bed, you may, inſtead of it, lift up your bedclothes with one arm and leg, ſo as to draw in a good deal of freſh air, and, by letting them fall, force it out again. This repeated twenty times, will ſo well clear them of the perſpirable matter they have imbibed, as to permit your ſleeping well for ſome time afterwards. But this latter method is not equal to the former.

Thoſe who do not love trouble, and can afford to have two beds, will find great luxury, in riſing when they wake in a hot bed, and going into the cool one. Such ſhifting of beds would alſo be of great ſervice to perſons ill of a fever, as it refreſhes, and frequently procures ſleep. A very large bed, that will

admit a removal, ſo diſtant from the firſt ſituation, as to be cool and ſweet, may in a degree, anſwer the ſame end.

One or two obſervations more will conclude this little piece. Care muſt be taken, when you lie down, to diſpoſe your pillow ſo as to ſuit your manner of placing your head, and to be perfectly eaſy: then place your limbs ſo as not to bear inconveniently hard upon one another, as, for inſtance, the joints of your ankles: for, though a bad poſition may at firſt give but little pain, and be hardly noticed, yet a continuance will render it leſs tolerable; and the uneaſineſs may come on, while you are aſleep, and diſturb your imagination.

Theſe are the rules of the art; but though they will generally prove effectual in producing the end intended, there is a caſe, in which the moſt punctual obſervance of them all will be totally fruitleſs. I need not mention the caſe to you, my dear friend: but my account of the art would be imperfect without it. The caſe is, when the perſon who deſires to have pleaſant dreams, has not taken care to preſerve, what is neceſſary above all things

A GOOD CONSCIENCE.

Letters to a young lady. By the rev. John Bennet. Continued from page 11.

LETTER IV.

YOUR queſtion is a very proper one; and I will give you the beſt ſatisfaction in my power.

Pronunciation, or that part of grammar, called orthoepy, as to any uncommon or difficult words, is governed by the quantity, which thoſe words have in the original language, from which they are derived. As you cannot be ſuppoſed to underſtand the dead languages, you will, of courſe, frequently, be at a loſs how to pronounce many words with propriety. The only method is recourſe to a dictionary; and the beſt, in my opinion, are thoſe of Sheridan and Johnſon. Pronunciation, however, is a very fluctuating thing; and though there certainly is a ſtandard of propriety, over which mere faſhion ought to have no power, yet I ſhould always recommend a conformity to the manners of the politeſt people you may happen to converſe with, rather than a pedantic affectation of grammatical ſtrictneſs. The latter would be thought a conceited oſtentation of knowledge, which, in a young lady, would not be forgiven.

The alluſions to Jupiter, Pallas, Venus, the Graces, the Muſes, Helicon, Parnaſſus, which have ſo much embarraſſed you in the poets you have lately read, will be fully explained in Tooke's pantheon, or hiſtory of the heathen gods. The general fact is, that before the knowledge of the true God dawned on their minds, theſe poor, ignorant heathens never dreamed of one omnipotent, all-ſufficient, all-pervading ſpirit, whom the ſcriptures have revealed, and deſcribed, as poſſeſſed of all poſſible perfections. They, therefore, formed to themſelves a multiplicity of gods, and attributed to one of them in particular, with a ſpecific name, every great quality or ſuperior excellence, that appeared beyond the ability of mortals. Theſe deities they arranged into different claſſes, according to their ſuppoſed degrees of pre-eminence; and fancied ſome of them to inhabit the heavens, and others, the woods, groves, rivers, ſprings, mountains, &c.

You will be amuſed with their fanciful opinions; and if you think aright, you will learn to bleſs the Almighty, on your knees, for having caſt your lot in an age and country, where the goſpel has diſperſed theſe miſts and errors, dignified our views and nature beyond all expreſſion, and given us the cleareſt knowledge of our duty. You will feel the force and propriety of that clauſe in

our liturgy: "We bleſs thee for our creation, preſervation, and all the bleſſings of this life; but above all, for thine ineſtimable love in the redemption of the world by our Lord Jeſus Chriſt; for the means of grace, and for the hope of glory."

LETTER V.

My dear Lucy,

A Little taſte for the fine arts of painting, ſculpture, and architecture, will be of ſingular uſe. It will render every excurſion you make, and every curioſity you behold, exceedingly delightful, and enable you to become entertaining to all, with whom you converſe.

A perſon thus accompliſhed, ſurveys an elegant pile of building, the deſigns of a Palladio, the landſcape of a Claude Lorrain, the portraits of a Titian, or the transfiguration of a Raphael, with uncommon rapture, and can entertain herſelf, for hours, with a ruin or a caſtle, in which the unſkilful can ſee nothing but deformity, or the corroſions of time.

Writers on ſculpture and architecture are not numerous: and I am wading beyond my depth, when I attempt to recommend them. Winkleman's reflexions on the ſculpture of the Greeks, Evelyn's parallel of ancient and modern architecture, and Morris's lectures, may give you ſome ideas on the ſubject.

On the art of painting, more has been written; yet without a natural genius for it, and ſome previous inſtructions from a maſter, I do not know, whether you will be able to make any great proficiency.

Webb's inquiry into the beauties of painting is a very learned, elegant, ingenious work, and intereſting, in an high degree, even to thoſe, who are, by no means, to be ranked among the cognoſcenti. The quotations from Homer, Virgil, Shakeſpeare, Milton, Boileau, Moliere, Racine, Taſſo, Arioſto, and Metaſtaſio, are not only well contrived to illuſtrate the ſubject, but to delight every perſon of reading and taſte; while the pictureſque imagery and ſplendid language, would ſtamp a value on any production.

I remember to have been charmed ſome years ago, with reading a ſmall work entitled "an eſſay on prints and pictureſque beauty." I do not recollect, whether it bore the name of any author; but it ſtruck me as a very intereſting and valuable performance. Genius and knowledge were wonderfully united, and embelliſhed the whole.

Ferguſon's art of drawing in perſpective, I conceive to be uſeful, as an elementary work. An eſſay on landſcape may be conſidered in the ſame light; and you will be inſtructed and delighted, at the ſame time, with Hayley's two epiſtles to Romney, and Freſnoy's art of painting, tranſlated by Maſon. This laſt mentioned author is ſaid to excel in the three ſiſter arts of painting, poetry, and muſic. In the two firſt he has given the world ſpecimens of his ſkill; with the latter he is ſaid frequently to entertain the circle of his private friends.

I am much intereſted, believe me, in the reliſh I would give you for this ſpecies of improvement. I look forward, with a degree of pleaſure, to the time, when I may be the companion of your little tours, and delighted with your obſervations; when we may hang, in curioſity, over foſſils and petrefactions; when we ſhall pore over paintings, building, ruins, with all the luxury of artiſts, and in ſuch rational, innocent pleaſures endeavour to forget the ſorrows, that will crowd on this variegated life.

LETTER VI.

IT is ſo very agreeable to peruſe voyages and travels into foreign countries by way of coming eaſily at a knowledge of their hiſtory, cuſtoms, ceremonies and degrees of civilization, that I do not wonder at the number and multiplicity of theſe productions. Authors wiſh to be read; and this is the ſort of work, which, if judiciouſly executed, ſuits every taſte. It has a tendency to

enlarge the mind, and diveſt it of illiberal prejudices. Books of this kind are now become ſo numerous, that the difficulty only is how to make the ſelection.

I will begin with Moore, for he has pleaſed univerſally. Your collection will be graced by his view of ſociety and manners in France, Switzerland, and Germany, in two volumes, and his view of ſociety in Italy, in two more.

Wraxall is another writer in this way, who has ſuperior merit. He has publiſhed a tour through the northern parts of Europe, and through France.

Pennant has been ſingularly happy in all his attempts. He intereſts the antiquarian, the ſcholar, and the man of genius in his various productions. His works are numerous. A tour through Scotland, voyages to the Hebrides, a tour in North Wales, a journey to Snowdon, and a journey from Cheſter to London, &c.

Switzerland is one of thoſe romantic countries, that delights us in idea. Coxe has given ſketches of it in a very pleaſing and pictureſque manner.

Sherlock's Engliſh traveller is a very original and entertaining book. The author is evidently a man of fancy and genius, but rather fulſome in his panegyrics on particular characters, and excentric both in his ſentiments and manner. He will, ſometimes, make you ſmile with egotiſms and the appearance of conceit; but he will enlighten your underſtanding.

Cordiner's antiquities and ſcenery of the north of Scotland is an entertaining work. The plates annexed to it, pleaſe the eye, and invigorate the imagination.

A tour to the lakes is become very faſhionable, and is ſaid abundantly to repay the traveller's curioſity. Weſt's deſcription of them may be uſeful, though the language appears too florid and poetical.

The tour to Ermenonville I have never ſeen; but it is mentioned as poſſeſſing conſiderable merit. Gilpin's deſcription of the river Wye abounds with beautiful ſcenery, and is a moſt lively and entertaining production.

But the catalogue would be endleſs. A thouſand other books of this kind are at hand, whenever you are diſpoſed to travel with them in your cloſet.

But after all this recommendation of different ſtudies, do not miſtake me. I do not want to make you a fine writer, an hiſtorian, a naturaliſt, a geographer, an aſtronomer, a poet, a painter, a connoiſſeur, or a virtuoſo of any kind. But I would have you to poſſeſs ſuch a general knowledge, as will uſefully and innocently fill up your leiſure hours, raiſe your taſte above fantaſtic levities, render you an agreeable friend and acquaintance, qualify you for the ſolid duties of your ſtation, whatever they may be, and elevate, above all, your ſoul to him, who is the ſource of all knowledge, greatneſs and perfection. *(To be continued.)*

A HINT TO FARMERS.

WHEAT.

WHEN this valuable grain has attained it full plumpneſs, and begins to ſhow its ripening colour, it ſhould be reaped and laid a few days with the ears a little elevated, to harden, before it is bound up, and afterwards ſtand at leaſt a week or ten days in ſhock, which will be the means of its proving ſweeter, weighing heavier, and yielding a much greater proportion of flour, and leſs of bran, than when it is ſuffered to ſtand on the ground until the ears become inverted, and the corn parched and ſhrivelled; but this is far from being the whole of the evil; for the ſtraw, when cut in a dry and brittle ſtate, is not ſo valuable for thatch, fodder, or litter, as it is when cut in a greener ſtate; and when a briſk wind happens, there is frequently a loſs ſuſtained of one third of the crop.